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# Asthma

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**Definition:** Respondents who have been told by a doctor, nurse, or health professional that they had asthma and that they still have asthma.

## Prevalence of Asthma

- South Dakota 7.1%
- Nationwide median 8.4%

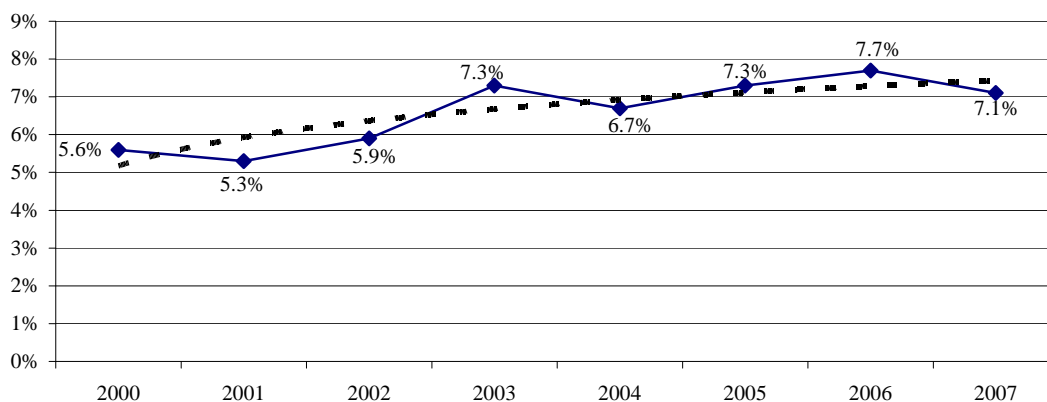
## Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for having asthma.

## Trend Analysis

Overall, the percent of respondents who stated they were told they have asthma has been increasing since this question was first asked in 2000. The percent of respondents who stated they were told they have asthma did decrease slightly from a high of 7.7 percent in 2006 to 7.1 percent in 2007.

**Figure 58**  
**Percent of Respondents Who Were Told They Have Asthma,**  
**2000-2007**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2000-2007

## Demographics

|                         |  |
|-------------------------|--|
| <b>Gender</b>           | There is no significant gender difference observed from the available data.  |
| <b>Age</b>              | The prevalence of asthma does not show a distinct pattern as age increases.  |
| <b>Race</b>             | American Indian females demonstrate a significantly higher prevalence of asthma than white females.  |
| <b>Region</b>           | Females in the American Indian counties region exhibit a very high prevalence of asthma, while females in the southeast region show a very low prevalence. Males do not exhibit this same regional difference. |
| <b>Household Income</b> | The prevalence of asthma is higher for those in lower household income groups.   |
| <b>Education</b>        | The prevalence of asthma generally decreases as education levels increase. This association is more evident in males.  |



**Employment Status** Those who are unable to work demonstrate a very high prevalence of asthma, while those who are employed for wages, self-employed, or a homemaker show a very low prevalence.

**Marital Status** Those who are widowed or have never been married exhibit a very high prevalence of asthma, while those who are married show a very low prevalence. These differences are much more evident with females.

**Table 67**  
**Respondents Who Were Told They Have Asthma, 2007**

|                          | Total        |            |                   | Male         |            |                  | Female       |            |                  |
|--------------------------|--------------|------------|-------------------|--------------|------------|------------------|--------------|------------|------------------|
|                          | # Resp.      | %          | 95% CI            | # Resp.      | %          | 95% CI           | # Resp.      | %          | 95% CI           |
| <b>Total</b>             | <b>6,829</b> | <b>7.1</b> | <b>(6.2-8.10)</b> | <b>2,798</b> | <b>6.1</b> | <b>(4.7-7.8)</b> | <b>4,031</b> | <b>8.0</b> | <b>(6.9-9.3)</b> |
| <b>Age</b>               |              |            |                   |              |            |                  |              |            |                  |
| 18-24                    | 238          | 11.5       | (7.3-17.7)        | 122          | 11.5       | (5.6-22.2)       | 116          | 11.5       | (6.5-19.4)       |
| 25-34                    | 760          | 7.4        | (5.5-9.7)         | 304          | 4.7        | (2.5-8.6)        | 456          | 10.1       | (7.5-13.6)       |
| 35-44                    | 926          | 4.9        | (3.5-6.9)         | 420          | 4.3        | (2.5-7.6)        | 506          | 5.5        | (3.7-8.2)        |
| 45-54                    | 1,406        | 5.2        | (4.0-6.7)         | 592          | 3.3        | (2.0-5.5)        | 814          | 7.0        | (5.2-9.4)        |
| 55-64                    | 1,337        | 5.8        | (4.6-7.4)         | 568          | 4.9        | (3.3-7.3)        | 769          | 6.8        | (5.1-9.1)        |
| 65-74                    | 1,051        | 7.5        | (5.9-9.5)         | 419          | 8.3        | (5.8-11.7)       | 632          | 6.9        | (5.0-9.3)        |
| 75+                      | 1,044        | 8.3        | (6.5-10.5)        | 361          | 9.2        | (6.2-13.5)       | 683          | 7.7        | (5.7-10.4)       |
| <b>Race</b>              |              |            |                   |              |            |                  |              |            |                  |
| White                    | 5,992        | 6.7        | (5.8-7.8)         | 2,456        | 5.7        | (4.4-7.4)        | 3,536        | 7.7        | (6.5-9.1)        |
| American Indian          | 586          | 9.4        | (6.6-13.4)        | 231          | 5.4        | (2.5-11.3)       | 355          | 13.6       | (9.2-19.7)       |
| <b>Region</b>            |              |            |                   |              |            |                  |              |            |                  |
| Southeast                | 1,534        | 6.5        | (5.0-8.5)         | 639          | 6.7        | (4.2-10.5)       | 895          | 6.3        | (4.9-8.1)        |
| Northeast                | 1,486        | 5.5        | (4.1-7.3)         | 629          | 4.1        | (2.4-6.8)        | 857          | 7.0        | (4.9-9.8)        |
| Central                  | 1,426        | 7.5        | (5.7-9.8)         | 577          | 6.9        | (4.5-10.4)       | 849          | 8.1        | (5.7-11.3)       |
| West                     | 1,521        | 8.9        | (6.9-11.3)        | 597          | 6.6        | (4.4-10.0)       | 924          | 10.6       | (7.8-14.4)       |
| American Indian Counties | 862          | 9.9        | (7.3-13.3)        | 356          | 6.5        | (3.7-11.2)       | 506          | 13.4       | (9.4-18.7)       |
| <b>Household Income</b>  |              |            |                   |              |            |                  |              |            |                  |
| Less than \$10,000       | 307          | 13.0       | (8.5-19.3)        | 102          | 14.3       | (7.0-26.8)       | 205          | 12.2       | (7.3-19.7)       |
| \$10,000-\$14,999        | 368          | 17.1       | (10.9-25.8)       | 122          | 10.7       | (5.1-21.2)       | 246          | 21.0       | (12.3-33.4)      |
| \$15,000-\$19,999        | 498          | 8.2        | (5.6-11.8)        | 178          | 6.0        | (3.0-11.5)       | 320          | 9.7        | (6.1-15.1)       |
| \$20,000-\$24,999        | 658          | 7.9        | (5.6-11.1)        | 229          | 6.6        | (3.6-11.9)       | 429          | 8.8        | (5.7-13.3)       |
| \$25,000-\$34,999        | 878          | 9.2        | (6.2-13.3)        | 385          | 10.5       | (5.9-18.1)       | 493          | 7.6        | (5.3-11.0)       |
| \$35,000-\$49,999        | 1,156        | 5.1        | (3.7-7.0)         | 526          | 3.9        | (2.4-6.5)        | 630          | 6.3        | (4.2-9.4)        |
| \$50,000-\$74,999        | 1,061        | 4.3        | (3.1-6.0)         | 484          | 2.7        | (1.6-4.5)        | 577          | 6.0        | (3.9-9.2)        |
| \$75,000+                | 1,033        | 4.3        | (3.1-6.1)         | 526          | 3.2        | (1.8-5.8)        | 507          | 5.8        | (3.8-8.8)        |
| <b>Education</b>         |              |            |                   |              |            |                  |              |            |                  |
| 8th Grade or Less        | 261          | 9.2        | (5.7-14.5)        | 139          | 9.7        | (5.3-17.4)       | 122          | 8.1        | (3.8-16.4)       |
| Some High School         | 376          | 11.0       | (7.3-16.4)        | 146          | 7.8        | (3.1-18.1)       | 230          | 14.2       | (9.4-21.0)       |
| High School or G.E.D.    | 2,257        | 7.9        | (6.0-10.4)        | 990          | 8.6        | (5.6-13.0)       | 1,267        | 7.1        | (5.2-9.7)        |
| Some Post-High School    | 1,920        | 7.6        | (6.1-9.4)         | 682          | 5.5        | (3.8-7.9)        | 1,238        | 9.2        | (7.0-11.9)       |
| College Graduate         | 2,003        | 4.8        | (3.8-6.1)         | 838          | 3.1        | (1.9-4.9)        | 1,165        | 6.6        | (5.1-8.6)        |
| <b>Employment Status</b> |              |            |                   |              |            |                  |              |            |                  |
| Employed for Wages       | 3,186        | 5.9        | (4.7-7.5)         | 1,281        | 5.3        | (3.3-8.2)        | 1,905        | 6.6        | (5.2-8.3)        |
| Self-employed            | 963          | 4.1        | (2.8-6.0)         | 636          | 3.5        | (2.1-5.6)        | 327          | 5.6        | (3.0-10.4)       |
| Unemployed               | 162          | 8.8        | (4.4-17.1)        | *            | *          | *                | *            | *          | *                |
| Homemaker                | 434          | 7.9        | (4.7-12.9)        | *            | *          | *                | *            | *          | *                |
| Retired                  | 1,648        | 9.0        | (7.5-10.8)        | 625          | 9.5        | (7.1-12.7)       | 1,023        | 8.6        | (6.8-10.7)       |
| Unable to Work           | 326          | 19.6       | (14.7-25.8)       | 134          | 17.2       | (10.1-27.7)      | 192          | 21.9       | (15.5-29.9)      |
| <b>Marital Status</b>    |              |            |                   |              |            |                  |              |            |                  |
| Married/Unmarried Couple | 4,105        | 5.7        | (4.9-6.6)         | 1,812        | 5.0        | (3.9-6.3)        | 2,293        | 6.4        | (5.3-7.7)        |
| Divorced/Separated       | 932          | 7.4        | (5.8-9.4)         | 397          | 5.7        | (3.8-8.7)        | 535          | 8.7        | (6.4-11.7)       |
| Widowed                  | 1,043        | 9.6        | (7.7-11.8)        | 175          | 6.3        | (3.4-11.5)       | 868          | 10.2       | (8.2-12.8)       |
| Never Married            | 731          | 11.4       | (7.7-16.5)        | 409          | 9.8        | (5.3-17.5)       | 322          | 13.9       | (8.7-21.6)       |

Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2007



## National Statistics

The national median for respondents who have asthma was 8.4 percent. South Dakota had 7.1 percent of respondents who have asthma. Florida had the lowest percent of respondents who have asthma with 6.2 percent, while Maine had the highest percent of respondents who have asthma with 10.3 percent.

**Figure 59**  
**Nationally, Respondents Who Were Told They Have Asthma, 2007**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2007

## Further Analysis

Following are data illustrating the percent of those who have asthma for various health behaviors and conditions. For example, 15.6 percent of respondents who stated they have fair or poor health have asthma, while 5.8 percent of respondents who stated they have excellent, very good, or good health status have asthma.

| Table 68<br>Asthma Prevalence for Selected Health Behaviors and Conditions, 2007 |               |               |          |
|--|---------------|---------------|----------|
| Health Behavior or Condition   | # Respondents | % with Asthma | 95% CI   |
| Obese (BMI = 30.0+)  | 1,825         | 9.3           | 7.6-11.4 |
| Overweight (BMI = 25.0-29.9)   | 2,546         | 5.7           | 4.5-7.3  |
| Recommended Weight (BMI = 18.5-24.9)   | 2,046         | 6.9           | 5.1-9.2  |
| No Leisure Time Physical Activity  | 1,851         | 9.1           | 6.8-12.1 |
| Leisure Time Physical Activity   | 4,973         | 6.5           | 5.5-7.5  |
| No Moderate Physical Activity  | 3,526         | 7.3           | 6.1-8.7  |
| Moderate Physical Activity   | 2,823         | 6.3           | 5.2-7.7  |
| No Vigorous Physical Activity  | 5,181         | 7.2           | 6.2-8.3  |
| Vigorous Physical Activity   | 1,344         | 6.0           | 4.5-7.9  |
| Less Than Five Servings of Fruits and Vegetables                                 | 5,344         | 7.1           | 6.0-8.3  |
| At Least Five Servings of Fruits and Vegetables                                  | 1,358         | 7.4           | 5.7-9.4  |



**Table 68 (continued)**  
**Asthma Prevalence for Selected Health Behaviors and Conditions, 2007**

| <b>Health Behavior or Condition</b>                         | <b># Respondents</b> | <b>% with Asthma</b> | <b>95% CI</b> |
|---|----------------------|----------------------|---------------|
| Current Smoker  | 1,286                | 7.8                  | 6.0-10.0      |
| Former Smoker   | 1,973                | 8.4                  | 7.0-10.0      |
| Never Smoked  | 3,557                | 6.2                  | 5.0-7.8       |
| Smokeless Tobacco Use                                       | 305                  | 9.2                  | 5.3-15.5      |
| No Smokeless Tobacco Use                                    | 6,238                | 6.8                  | 6.0-7.7       |
| Diabetes  | 654                  | 8.5                  | 6.3-11.4      |
| No Diabetes   | 6,174                | 7.0                  | 6.0-8.0       |
| Hypertension  | 2,328                | 9.4                  | 7.6-11.4      |
| No Hypertension   | 4,495                | 6.3                  | 5.2-7.5       |
| High Blood Cholesterol                                      | 2,220                | 6.7                  | 5.6-8.2       |
| No High Blood Cholesterol                                   | 3,411                | 6.1                  | 5.2-7.2       |
| No Health Insurance (18-64)                                 | 405                  | 9.8                  | 6.2-15.4      |
| Health Insurance (18-64)                                    | 4,013                | 6.2                  | 5.2-7.4       |
| Employer Based Health Insurance Coverage (18-64)            | 2,578                | 5.4                  | 4.3-6.8       |
| Private Health Insurance Plan (18-64)                       | 556                  | 4.7                  | 2.4-8.7       |
| Medicare (18-64)  | 155                  | 11.2                 | 7.0-17.5      |
| Medicaid or Medical Assistance (18-64)                      | 156                  | 17.9                 | 11.3-27.3     |
| The Military, CHAMPUS, TriCare, or the VA (18-64)           | 227                  | 7.7                  | 3.7-15.3      |
| The Indian Health Service (18-64)                           | 263                  | 9.3                  | 5.6-15.1      |
| No Flu Shot (65+)   | 501                  | 6.5                  | 4.4-9.6       |
| Flu Shot (65+)  | 1,587                | 8.4                  | 6.9-10.1      |
| No Pneumonia Shot (65+)                                     | 722                  | 4.4                  | 2.8-6.7       |
| Pneumonia Shot (65+)  | 1,285                | 10.0                 | 8.3-12.1      |
| Doesn't Use Sun Block                                       | 4,132                | 6.4                  | 5.4-7.6       |
| Uses Sun Block  | 1,604                | 6.9                  | 5.3-8.9       |
| Doesn't Know Cervical Cancer - HPV Connection (Females)     | 795                  | 6.7                  | 5.1-8.9       |
| Knows Cervical Cancer - HPV Connection (Females)            | 2,999                | 8.4                  | 7.1-10.0      |
| Drank Alcohol in Past 30 Days                               | 3,501                | 6.3                  | 5.1-7.8       |
| No Alcohol in Past 30 Days                                  | 3,285                | 8.1                  | 6.9-9.6       |
| Binge Drinker   | 875                  | 5.3                  | 3.7-7.6       |
| Not a Binge Drinker   | 5,812                | 7.3                  | 6.4-8.3       |
| Heavy Drinker   | 220                  | 3.0                  | 1.4-6.5       |
| Not a Heavy Drinker   | 6,396                | 7.0                  | 6.2-8.0       |
| Previously Had a Heart Attack                               | 459                  | 12.3                 | 9.2-16.3      |
| Never Had a Heart Attack                                    | 6,345                | 6.6                  | 5.8-7.7       |
| Have Angina or Coronary Heart Disease                       | 398                  | 14.4                 | 10.9-18.8     |
| Do Not Have Angina or Coronary Heart Disease                | 6,361                | 6.7                  | 5.8-7.8       |
| Previously Had a Stroke                                     | 262                  | 12.0                 | 8.3-17.0      |
| Never Had a Stroke  | 6,556                | 6.9                  | 6.0-8.0       |
| Arthritis   | 2,412                | 10.3                 | 8.8-12.0      |
| No Arthritis  | 4,314                | 5.9                  | 4.9-7.3       |
| Arthritis - Activities Limited                              | 1,155                | 13.6                 | 11.3-16.3     |
| No Arthritis - Activities Limited                           | 5,551                | 6.2                  | 5.2-7.3       |
| Fair or Poor Health Status                                  | 1,137                | 15.6                 | 12.9-18.6     |
| Excellent, Very Good, or Good Health Status                 | 5,673                | 5.8                  | 4.9-6.9       |
| Physical Health Not Good for 30 Days of the Past 30         | 502                  | 18.0                 | 13.8-23.2     |
| Physical Health Not Good for 0-29 Days of the Past 30       | 6,180                | 6.3                  | 5.4-7.4       |
| Mental Health Not Good for 20-30 Days of the Past 30        | 374                  | 12.9                 | 9.2-17.9      |
| Mental Health Not Good for 0-19 Days of the Past 30         | 6,337                | 6.7                  | 5.8-7.8       |
| Usual Activities Unattainable for 10-30 Days of the Past 30 | 489                  | 16.3                 | 12.5-21.1     |
| Usual Activities Unattainable for 0-9 Days of the Past 30   | 6,279                | 6.4                  | 5.5-7.5       |



| <b>Table 68 (continued)</b><br><b>Asthma Prevalence for Selected Health Behaviors and Conditions, 2007</b> |                      |                      |               |
|--|----------------------|----------------------|---------------|
| <b>Health Behavior or Condition</b>  | <b># Respondents</b> | <b>% with Asthma</b> | <b>95% CI</b> |
| Dissatisfied / Very Dissatisfied with Life   | 268                  | 12.8                 | 8.2-19.2      |
| Satisfied / Very Satisfied with Life   | 6,297                | 6.7                  | 5.8-7.6       |
| Physical, Mental, or Emotional Disability  | 1,546                | 14.2                 | 12.0-16.8     |
| No Physical, Mental, or Emotional Disability   | 5,212                | 5.5                  | 4.6-6.7       |
| Disability with Special Equipment Needed   | 611                  | 15.8                 | 12.7-19.5     |
| No Disability with Special Equipment Needed  | 6,152                | 6.5                  | 5.6-7.6       |
| Two or More Hours of TV Watched Per Day  | 4,860                | 7.4                  | 6.4-8.5       |
| Less Than Two Hours of TV Watched Per Day  | 1,579                | 5.3                  | 4.0-7.1       |
| Never Been Tested for HIV (18-64)  | 3,431                | 5.7                  | 4.6-7.1       |
| Been Tested for HIV (18-64)  | 994                  | 9.1                  | 7.1-11.5      |
| Diarrhea in Past 30 Days   | 960                  | 11.5                 | 8.8-15.0      |
| No Diarrhea in Past 30 Days  | 5,585                | 6.1                  | 5.3-7.1       |
| Military Veteran   | 1,000                | 6.5                  | 4.9-8.5       |
| Not a Military Veteran   | 5,826                | 7.1                  | 6.1-8.3       |

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2007